

In the Claims:

Please amend the claims as follows:

1. (currently amended) A circuit board, comprising:
a signal conductor; ~~and~~
a conductive plane having an opening, wherein dimensions of the opening and proximity of the opening to the signal conductor are selected to affect an impedance of the signal conductor; and
a bridging conductor that electrically couples the conductive plane across the opening and that has a width dimensioned to provide a current pathway that presents a negligible impedance discontinuity to a signal flowing generally parallel to the opening.
2. (original) The circuit board of claim 1, wherein signal conductor has a width, and the opening has a width greater than the signal conductor width.
3. (original) The circuit board of claim 1, wherein the signal conductor is centered with respect to the opening.
4. (currently amended) The circuit board of claim 1, wherein a portion of the opening overlaps ~~is located beneath~~ the signal conductor.
5. (currently amended) The circuit board of claim 1, wherein no portion of the opening overlaps ~~is located beneath~~ the signal conductor.
6. (original) The circuit board of claim 1, wherein the signal conductor and the conductive plane form at least a portion of a signal-transmission path.
7. (original) The circuit board of claim 6, wherein the transmission path presents substantially uniform impedance to a high-frequency signal.
8. (original) The circuit board of claim 7, wherein the impedance of the transmission path is a function of the opening width.

9. (original) The circuit board of claim 7, wherein the signal conductor has a width, and the impedance of the transmission path is a function of the signal conductor width.

10. (original) The circuit board of claim 1, wherein the opening is substantially parallel to the signal conductor.

11. (original) The circuit board of claim 1, wherein the opening is continuous.

12 - 13. Canceled

14. (original) The circuit board of claim 1, further including an insulating layer between the signal conductor and the conductive plane.

15. (original) The circuit board of claim 1, wherein the signal conductor comprises a trace.

16. (original) The circuit board of claim 1, wherein the signal conductor is inside a circuit board.

17. (currently amended) A circuit board, comprising:
a signal conductor disposed in a first plane;
~~a conductive plane having a first and second conductive regions disposed in a~~
second plane;
a first opening disposed in the second plane, substantially parallel to the signal
conductor, and contiguous with and disposed between the first and second conductive
regions;
a third conductive region disposed in the second plane;
a second opening disposed in the second plane, substantially parallel to the
signal conductor, and contiguous with and disposed between the second and third
conductive regions;
wherein the first, second, and third conductive regions are operable at a common
voltage; and~~and a second opening,~~

wherein respective dimensions of the first and second openings and a respective proximity of the openings to the signal conductor are selected to affect an impedance of a transmission path formed by the signal conductor and the second conductive region.

18. (currently amended) The circuit board of claim 17, wherein no portion of the first opening is located directly above or beneath the signal conductor.

19. (currently amended) The circuit board of claim 17, wherein the transmission path is formed by the signal conductor and the first, second, and third conductive regions~~a portion of the conductive plane between the first opening and the second opening defines a return-signal conductor, and wherein the signal conductor and the return-signal conductor form at least a portion of a transmission path.~~

20. (currently amended) The circuit board of claim 19~~7~~, wherein a longitudinal centerline of the second conductive region~~return-signal conductor~~ coincides with a longitudinal centerline of the signal conductor.

21. (currently amended) The circuit board of claim 19~~7~~, wherein the transmission path presents substantially uniform impedance to a high-frequency signal.

22. (currently amended) The circuit board of claim 19~~7~~, wherein the impedance of the transmission path is a function of the first opening width.

23. (currently amended) The circuit board of claim 19~~7~~, wherein the impedance of the transmission path is a function of the second conductive region~~return-signal conductor~~ width.

24. (currently amended) The circuit board of claim 17, further including a bridging conductor that electrically couples the first, second, and third conductive regions~~plane~~ across the first and second openings.

25. (currently amended) A method of manufacturing a multi-layered printed circuit board that handles a high-frequency signal, comprising the steps of:
forming a signal-conducting trace on a first insulating layer;

forming a second insulating layer adjacent to the first insulating layer;
forming a conductive plane on the second insulating layer; and
forming an opening in the conductive plane, wherein dimensions of the opening and proximity of the opening to the signal conductor are selected to affect an impedance of the signal conductor;
forming a bridging conductor across the opening; and
dimensioning the bridging conductor to provide a current pathway that presents a negligible impedance discontinuity to a signal flowing generally parallel to the opening.

26. (currently amended) A method of manufacturing a multi-layered printed circuit board that handles a high-frequency signal, comprising the steps of:
forming a signal-conducting trace on a first insulating layer;
forming a second insulating layer adjacent to the first insulating layer;
forming a conductive plane on the second insulating layer; and
forming in the conductive plane a spaced apart first opening and a second opening that are substantially parallel to the signal-conducting trace and that define electrically connected first outer, middle, and second outer regions of the conductive plane, wherein respective dimensions of the openings and respective proximity of the openings to the signal-conducting trace or being are selected to provide a transmission path formed by the signal-conducting trace and at least the middle region of the conductive plane with a predetermined affect an impedance of the signal conductor.

27. (currently amended) The method of claim 26, wherein the signal-conducting trace is aligned with the middle region of the first opening and the second opening cooperatively define a conductive plane relative to the trace.

28. (currently amended) A method of conducting a high-frequency signal in a circuit board, comprising the steps of:
transmitting the high-frequency signal along a signal conductor disposed in a first plane of the circuit board; and
returning the high-frequency signal along a first conductive region in a second plane that also includes a second conductive region separated from the first conductive region by a first opening and a third conductive region separated from the first conductive region by a second opening, the first, second, and third conductive regions

at a common voltage, portion of a conductive plane having an opening, wherein dimensions of the openings and proximity of the openings to the signal conductor defining an impedance experienced by the signal~~are selected to affect an impedance of the signal conductor.~~

29. Canceled.

30. (currently amended) An electronic system, comprising:

a circuit board, comprising,

a signal conductor,

a conductive plane having an opening, wherein dimensions of the opening and proximity of the opening to the signal conductor are selected to affect an impedance of the signal conductor, and

a bridging conductor that electrically couples the conductive plane across the opening and that has a width dimensioned to provide a current pathway that presents a negligible impedance discontinuity to a signal flowing generally parallel to the opening.~~a circuit board that includes a signal conductor and a conductive plane having a continuous opening aligned with the signal conductor, the signal conductor and a portion of the conductive plane proximate to the opening defining at least a portion of a signal transmission path.~~

31. (currently amended) A system~~circuit board~~, comprising:

a circuit board, comprising,

a signal conductor disposed in a first plane,

first and second conductive regions disposed in a second plane,

a first opening disposed in the second plane, substantially parallel to the signal conductor, and contiguous with and disposed between the first and second conductive regions,

a third conductive region disposed in the second plane,

a second opening disposed in the second plane, substantially parallel to the signal conductor, and contiguous with and disposed between the second and third conductive regions,

wherein the first, second, and third conductive regions are operable at a common voltage, and

wherein respective dimensions of the first and second openings and a respective proximity of the openings to the signal conductor are selected to affect an impedance of a transmission path formed by the signal conductor and the second conductive region.~~a signal conductor having a conductor width; and a conductive reference plane having a continuous opening aligned with the signal conductor, the opening having an opening width.~~

32. (new) The circuit board of claim 1 wherein the signal trace is disposed in a plane that is separate from and parallel to the conductive plane.